

What is claimed is:

1. Functional object data comprising at least imaging data for imaging functional resources as functional objects in a virtual space and name identifiers allocated to the respective functional objects, and optionally, function control data for provoking or creating a function of a functional object as a subject of control and a second name identifier allocated to the object as the subject of control, the functional object data having a structure to allow a computer to judge whether a relation between a name identifier allocated to a functional object having a predetermined relation to one functional object and a second name identifier allocated to the one functional object satisfies a predetermined condition, interpret function control data on the one functional object when the relation is judged to satisfy the predetermined condition, and control either directly or indirectly imaging data on the functional object having the predetermined relation to the one functional object based on the interpretation thus made to achieve function control over the functional object having the predetermined relation to the one functional object.
2. The functional object data in accordance with claim 1, wherein the name identifier comprises a plurality of parallel name identifiers.

3. The functional object data in accordance with claim 1 or 2, wherein the name identifier comprises a plurality of element name identifiers forming a hierarchical structure.

4. The functional object data in accordance with claim 1, wherein the predetermined relation is expressed by spatial relation data indicative of a spatial relation between the functional objects, structural relation data indicative of a coupling relation between the functional objects, attributive relation data indicative of a relation between roles to be played by the respective functional objects to produce an expected phenomenon, or a combination thereof, while the computer is capable of retrieving and extracting the functional objects based on the spatial relation data, structural relation data, attributive relation data, or a combination thereof.

5. The functional object data in accordance with any one of claims 1 to 4, wherein the function control data is structured to be capable of being added, deleted or modified independently of the imaging data.

6. The functional object data in accordance with any one of claims 1 to 5, wherein the function control data is of a structure comprising a plurality of unit control data items

capable of being added, deleted or modified independently of the imaging data.

7. The functional object data in accordance with any one of claim 1 to 5, wherein the function control data is of text form.

8. The functional object data in accordance with any one of claim 1 to 7, wherein the function control data has a hierarchical structure in which a higher-level unit control data item belonging to a higher-level hierarchy is related to at least one lower-level unit control data item belonging to a lower-level hierarchy.

9. The functional object data in accordance with any one of claim 1 to 8, further comprising utilization data indicative of a status of utilization of the functional objects in the virtual space.

10. The functional object data in accordance with any one of claims 1 to 9, further comprising indicator data for quantitatively or qualitatively evaluating utilization of the functional objects in the virtual space.

11. The functional object data in accordance with any one of claims 1 to 10, wherein:

the functional objects each have a joint described by data capable of indicating a relative or absolute position of the joint in the virtual space; and

the computer is configured to be capable of coupling plural functional objects together in the virtual space by coupling the joints of the respective functional objects together.

12. An object data receiving unit for use in a functional object imaging system, comprising:

an object data receiving section for receiving functional object data as recited in any one of claims 1 to 11; and

an object control section operative to retrieve and extract a functional object having a predetermined relation to one functional object imaged in a virtual space based on the object data received, and then interpret function control data on the one functional object and control either directly or indirectly imaging data on the functional object thus extracted based on the interpretation thus made to achieve function control over the extracted functional object in the virtual space when a name identifier of the extracted functional object has a predetermined relation to a second name identifier of the one functional object.

13. The object data receiving unit in accordance

with claim 12, further comprising a recording section for recording a history of operation having been performed on the unit to image functional resources as the functional objects in the virtual space and a phenomenon having occurred in the virtual space.

14. The object data receiving unit in accordance with claim 13, further comprising a recorded data transmitting section for externally transmitting data recorded by the recording section.

15. The object data receiving unit in accordance with any one of claims 12 to 14, further comprising an indicator data calculating section for calculating an indicator allowing a user to operate the unit efficiently based on a history of operation having been performed on the unit to image functional resources as the functional objects in the virtual space and a phenomenon having occurred in the virtual space.

16. The object data receiving unit in accordance with claim 15, wherein the indicator is calculated based on data on utilization of the object data receiving unit including utilization frequencies within a fixed period and a total utilization time.

17. The object data receiving unit in accordance with any one of claims 12 to 16, further comprising an automatic editor section for coupling a plurality of functional objects in the virtual space together by means of respective joints thereof when the plurality of functional objects have a predetermined relation therebetween.

18. An object data transmitting unit for use in a functional object imaging system, which is connected to a object data receiving unit as recited in any one of claims 12 to 17 for communication, comprising:

a specification data receiving section for receiving specification data comprising data on specifications of a required article, service or analog;

an object data forming section for forming object data on all or part of plural functional objects based on the specification data, the plural functional objects being capable of exhibiting a function satisfying the specifications in a virtual space when combined together; and

an object data transmitting section for transmitting the object data formed by the object data forming section.

19. The object data transmitting unit in accordance with claim 18, further comprising a unit control data storage section for storing unit control data items capable of being added, deleted and modified independently of imaging data,

plural ones of which form function control data, wherein the object data forming section is operative to fetch the plural ones of the unit control data items from the unit control data storage section based on the specification data and combine the unit control data items together to form the function control data.

20. The object data transmitting unit in accordance with claim 18 or 19, wherein each of the unit control data items includes a name identifier of an applicable functional object, while the object data forming section is operative to fetch a unit control data item including a name identifier matching a name identifier of a functional object as a subject of control.

21. The object data transmitting unit in accordance with claim 18 or 19, wherein the functional object represents production equipment for producing a predetermined article to be produced or sold.

22. The object data transmitting unit in accordance with claim 18 or 19, wherein the functional object represents a predetermined article to be produced or sold.

23. The object data transmitting unit in accordance with claim 18 or 19, wherein the functional object represents

personnel including part-time workers and employees stationed in a layout space of a factory, office or house, or an article including industrial machines, office equipment and furniture disposed in the layout space.

24. A managing unit for use in a functional object imaging system, which is connected to an object data receiving unit as recited in any one of claims 12 to 17 for communication, comprising a recorded data receiving section for receiving data on utilization of functional objects at the object data receiving unit.

25. A functional object imaging system comprising an object data receiving unit as recited in any one of claims 12 to 17, and an object data transmitting unit as recited in any one of claims 18 to 23, at least one of which is provided with a charging management section for conducting processing related to charging for utilization of functional objects.